

## REMARKS

Applicant respectfully requests reconsideration of the above identified application. Claims 1-21 are pending. Claims 1-7, 9-14, 20 and 46 are rejected. Claims 8, 11, 15 and 21 are objected to.

The Office Action rejects Claims 1-2, 4-5, 7, 9-10, 14, 16-17 and 19-20 under 35 U.S.C. 102(c) as allegedly being anticipated by U.S. Patent 6,735,228 (Tsai).

Claim 1 sets forth a method comprising: generating a digital voltage sequence; converting the digital voltage sequence to a first current signal having an adjustable bias mode and a modulation mode; adjusting the bias mode of said first current signal through one or more bias control input; and driving a first laser using said first current signal to generate a first optical signal transmission.

The Office Action indicates that converting the digital voltage sequence to a first current signal having an adjustable bias mode is disclosed by Fig. 3a, #300 of Tsai, and that adjusting the bias mode of said first current signal through one or more bias control input disclosed by Fig. 3a, #320 where #324 is a bias control input.

Tsai, on the other hand, discloses that the predetermined current  $I_L$  is a bias current of the light-emitting device (Fig. 2a; col. 4, lines 2-3) and that point B in Figure 2B is the predetermined current  $I_L$  (Fig. 2B; col. 4, lines 11-12). Tsai states that the control circuit 300 adjusts the gate voltage  $V_g$  according to the predetermined current  $I_L$  provided by the current source 324 (Fig. 3; col. 4, lines 60-62). Therefore, Applicant respectfully submits that Tsai does not disclose an adjustable bias mode, but rather a predetermined bias current, which is fixed.

Applicant respectfully submits that in order for a rejection based on anticipation to be made, the identical invention must be shown in as complete detail as is contained in the claim. *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989).

Of course, the current  $I_{out}$  of Tsai must be adjusted between the bias mode and the modulation mode to drive LD302 (Fig. 3) but that disclosure alone does not anticipate

an adjustable bias mode. In Claim 1, for example, Applicant has set forth an adjustable bias mode in contrast to a modulation mode.

It was explained recently in *Phillips v. AWH Corp.*, 415 F.3d 1303, 1313; 75 USPQ2D (BNA) 1321 (Fed. Cir. 2005): "Importantly, the person of ordinary skill in the art is deemed to read the claim term not only in the context of the particular claim in which the disputed term appears, but in the context of the entire patent, including the specification."

If construed properly, through the eyes of one skilled in the art who has read and understood the specification, Claim 1 requires that the bias mode be adjustable through one or more bias control input, not by redesigning the circuit with a different reference-current component (e.g. current source 324).

Accordingly, Applicant requests the Examiner withdraw the rejection of Claim 1 under 35 U.S.C. 102(c).

Similarly, Claim 4 sets forth a method comprising: generating a digital voltage sequence; converting the digital voltage sequence to a first current signal having a bias mode and an adjustable modulation mode; adjusting the modulation mode of said first current signal through one or more modulation control input; and driving a first laser using said first current signal to generate a first optical signal transmission.

The Office Action indicates that converting the digital voltage sequence to a first current signal having a bias mode and an adjustable modulation mode is disclosed by Fig. 3a, #300 of Tsai, and that adjusting the modulation mode of said first current signal through one or more modulation control input is disclosed by Fig. 3a, #310 where #314 is a modulation control input.

But Tsai discloses that point A in Figure 2B is the predetermined current  $I_H$  corresponding to the high level of the gate voltage  $V_H$  (Fig. 2B; col. 4, lines 9-11). Tsai states that the comparison circuit 310 makes the output current  $I_{H1}$  equal to the predetermined current  $I_H$  provided by the current source 314 (Fig. 3; col. 4, lines 47-49). Therefore, Applicant respectfully submits that Tsai does not disclose an adjustable modulation mode, but rather a predetermined current  $I_H$  that is the sum of a predetermined bias current and a predetermined modulation current, both of which are fixed (Fig. 2A; col. 4, lines 3-5).

Applicant respectfully submits that, if construed properly, through the eyes of one skilled in the art who has read and understood the specification, Claim 4 requires that the modulation mode be adjustable through one or more modulation control input, not by redesigning the circuit with a different reference-current component (e.g. current source 314).

Accordingly, Applicant requests the Examiner withdraw the rejection of Claim 4 under 35 U.S.C. 102(e).

Claim 7 sets forth an optical device driver comprising: a buffered level shifter circuit to shift an input voltage to a first voltage level or to a second voltage level; a modulation circuit to generate a first current signal of a modulation mode responsive to the input voltage of the first voltage level and to generate the first current signal of a bias mode responsive to the input voltage of the second voltage level; a bias control circuit to adjust the bias mode of said first current signal through one or more bias control inputs; and a modulation control circuit to adjust the modulation mode of said first current signal through one or more modulation control inputs.

Similarly, Claim 14 sets forth an optical signaling system comprising: a digital electronic interface to transmit a digital voltage input sequence; a buffered level shifter circuit to shift an input voltage to a first voltage level or to a second voltage level responsive to the digital voltage input sequence; a modulation circuit to generate a first current signal of a modulation mode responsive to the input voltage of the first voltage level and to generate the first current signal of a bias mode responsive to the input voltage of the second voltage level; a bias control circuit to adjust the bias mode of said first current signal through one or more bias control inputs; a modulation control circuit to adjust the modulation mode of said first current signal through one or more modulation control inputs; and a laser to generate an optical signal responsive to the first current signal.

The Office Action indicates that a bias control circuit to adjust the bias mode of said first current signal through one or more bias control inputs is disclosed by Fig. 3a, #320 where #324 is a bias control input, and that a modulation control circuit to adjust the modulation mode of said first current signal through one or more modulation control inputs is disclosed by Fig. 3a, #310 where #314 is a modulation control input.

In similarity to Claims 1 and 4, Applicant respectfully submits that, if construed properly, through the eyes of one skilled in the art who has read and understood the specification, Claims 7 and 14 require that the bias mode and the modulation mode be adjustable through one or more bias control inputs and through one or more modulation control inputs, respectively, not by redesigning the circuit with different reference-current components (e.g. current sources 324 and 314). Therefore, Applicant does not believe Tsai shows the identical invention in as complete detail as is contained in Claims 7 and 14.

Accordingly, Applicant requests the Examiner withdraw the rejection of Claims 7 and 14 under 35 U.S.C. 102(c).

With regard to Claims 2, 5 and 19-20, for the same reason given above, Applicant respectfully submits that Tsai does not show the identical invention in as complete detail as is contained in the claims.

With regard to Claims 9 and 16, Applicant respectfully submits that nowhere does Tsai disclose or suggest use of a pMOSFET for any purpose (see the Examiner's rejection of Claims 12-13 and 18, p. 8).

With regard to Claims 10 and 17, Applicant respectfully submits that nowhere does Tsai disclose or suggest that Q508 reduces an overshoot of the first current signal (identified with IL1 or IH1 in the Office Action, p. 4) as suggested.

Accordingly, Applicant requests the Examiner withdraw the rejection of Claims 2, 5, 9-10, 16-17 and 19-20 under 35 U.S.C. 102(c).

The Office Action rejects Claims 3 and 6 under 35 U.S.C. 103(a) as allegedly being unpatentable over Tsai in view of U.S. Patent 5,978,393 (Felderman) stating that it would have been obvious to combine the method of Tsai with an additional diode laser to increase transmission capabilities of the system and drive the laser with the converted clock signal of Feldman to reduce the amount of noise introduced into the power supply by use of the modulation current.

The Office Action also rejects Claims 12-13 and 18 under 35 U.S.C. 103(a) as allegedly being unpatentable over Tsai in view of U.S. Patent Application No. 2004/0101007 (Bozso) stating that it would have been obvious to combine the laser driver of Tsai with the CMOS circuit of Bozso in order to reduce power consumption

when the gates are not being switched and in order to take advantage of the VCSEL's high coupling efficiency with optical fibers.

Applicant disagrees, but in light of the deficiencies of Tsai and being respectful of the Examiner's time, Applicant reserves the right to present arguments at a later time if the rejections are maintained.

Therefore, Applicant respectfully submits that Claims 1-2, 4-5, 7, 9-10, 14, 16-17 and 19-20 are patently distinguished over the art cited by the Examiner. Applicant further believes that Claims 3, 6 and 12-13 and 18 being dependent therefrom are also patentable.

In accordance with the above arguments, Applicant respectfully submits that Claims 1-241 are presently in condition for allowance and such action is earnestly solicited.

#### CONCLUSION

Applicant respectfully submits the present claims for allowance. If the Examiner believes a telephone conference would expedite or assist in the allowance of the present application, the Examiner is invited to call Lawrence M. Mennemeier at (408) 765-2194.

Authorization is hereby given to charge our Deposit Account No. 02-2666 for any charges that may be due.

Respectfully submitted,

BLAKELY, SOKOLOFF, TAYLOR & ZAFMAN

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